# Project proposal for exchange students

**Topic : Applying/developing clustering approaches for post-processing chemical and biological images**

**Substantial efforts have been dedicated these last few years to develop processing and analysis of single-molecule fluorescence microscopy data to produce superresolution nanoscopic images. In this project, the focus will be on image post-processing and quantification applying clustering approaches. The objective is to assess how the molecules aggregate together and to what extent their distribution differs from randomly distributed molecules.**

**Keywords : Chemometrics, Data & Image Analysis, Matlab, Chemical image, Spectroscopy**

**Host laboratory : LASIR (Laboratory of Infrared and Raman Spectrochemistry) / CNRS**
**Website : http://lasir.univ-lille1.fr/?page_id=5498**

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**Level of studies :**

**Bachelor's level (undergraduate)** ☐

**Master's level (postgraduate)** ✔

**Duration :**

**3 months** ✔
**4 months** ✔
**5 months** ✔

**Type of evaluation**
**Written report and oral defense**

**No funding available from the laboratory.**